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HOMOPTERA OF FLORIDA

HERBERT OSBORN

The following list is an attempt to bring together all available data on the Homopteran fauna of Florida. The list published by Professor Barber[1] naturally forms the basis for any such effort and I have included the records there given with the authorities. I have, however, adopted the nomenclature and arrangement of Van Duzee's Catalogue in the main, as this will be for many years the most convenient means of comparison.

The numerous additions to the Barber list are largely due to active collecting by Professor C. J. Drake, whose summer captures in 1918 were turned over to me for study and a number are due to specimens submitted to me by Professor J. R. Watson of the Florida Experiment Station, while a few trace back to earlier collections by Professor H. A. Gossard. Initials of these gentlemen will indicate the source for the species entered as also for the many Gainesville records that appear. The Gainesville locality records have a special value since so large a part of the previous records have been from coastal localities and in many cases represent only winter collecting. The value of such a list is of course dependent on the accuracy of the identification and I have endeavored to verify all the previous records as well as to satisfy myself as to the identity of the species newly entered. In any comparison with other regions for the purpose of determining the source of the fauna or the recent introduction of new arrivals it is very clear that reliable records for the regions

[1]In Bull. Am. Mus. Nat. Hist. Vol. 33, pp. 495-535 (1914).

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compared are essential. While many of the native species are important pests some of the worst enemies to agriculture are probably introductions. A prompt recognition of new arrivals may serve a very useful purpose in preventing or reducing their destructive increase or distribution.

Note. Collections made by the writer during the winter of 1921 at St. Petersburg, Tampa, Key West, Homestead, Miami, Delray, West Palm Beach, Canal Point, LaBelle, Ft. Myers, Manatee, Ruskin and Gainesville have extended the known range of a number of the species as well as adding a number not hitherto recognized in the state. The latter are marked with an asterisk—*.

SUB ORDER HOMOPTERA

CICADIDAE

Tibicen biconica Walk. Key West, June (Acad. Nat. Sci. Phil.); Key West (Uhler); "Florida" (Macgillivray).

Tibicen bicosta Walk. La Grange, Sept. (Davis); "Southern Florida" (Uhler); "Florida" (Macgillivray). Common in the state but restricted to the South.

Tibicen linnei (S. & G.) Gainesville (?) (C. J. D.)

Tibicen pruinosa Say (S. & G.) Gainesville (C. J. D.)

Tibicen davisi (Sm. and Gr.) Miami, Georgiana (U. S. N. M.); Miami, Jan. (Davis); Miami, Sept. (Acad. Nat. Sci. Phil.).

Tibicen erratica (Osb.) Pablo Beach, Sept., Big Pine Key, Sept. (Davis). Oviposits in cotton stems.

Tibicen grossa (Fab.) Ormond (Mrs. Slosson).

Tibicen lyricen (de Geer) Lake City (U. S. N. M.); "Florida" (Sm. and Gr.).

Tibicen reperta (Uhl.) "Florida" (Uhler).

Tibicen sayi (Sm. and Gr.) LaBelle, Apr. (Davis); "Florida" (U. S. N. M.).

Tibicen sayi var. *australis* (Davis). La Grange, Sept. (Davis).

Tibicen similaris (Sm. and Gr.) Fernandina (U. S. N. M.); Jacksonville, Sept., La Grange, Sept. (Davis).

Tibicen viridifascia (Walk.) (*sordidata* Uhl.); "Southern Florida". Oviposits in stems of Sea Oats *(Uniola)* and lives in tidal zone of shore line as observed in North Carolina. (See Osborn & Metcalf. Annals E. S. A., Vol. 13, p. 108.)

Tibicen vitripennis Say. "Florida" (Uhler).

Tibicen hieroglyphica Say. "Apparently common throughout the southern portion of Florida" (Van Duzee); Ormond (Mrs. Slosson); Lakeland, Mch., May, LaBelle, Apr., LaGrange, Sept. (Davis); St. Augustine (Johnson). Gainesville (C. J. D.)

Melampsalta parvula Say. Tampa (Van Duzee); Lakeland, May (Davis). North to Ohio, common.

MEMBRACIDAE

Ceresa stimulea Van D. Estero (Van Duzee); Ormond, Jacksonville (Mrs. Slosson).

Ceresa brevistylus Van D. Crescent City, Sanford (Van Duzee and A. M. N. H.). "Flat woods," Gainesville, Aug. 25. (J. R. W.)

Ceresa patruelis Stal. "Florida" (Van Duzee).

Stictocephala diminuta Van D. Biscayne Bay (Mrs. Slosson).

Stictocephala festina Say. Crescent City, St. Petersburg (Van Duzee); Gainesville. (J. R. W.)

Sticticephala lutea Walk. Walton Co. (McAtee).

Stictocephala substriata Walk. Belleair, Jacksonville, Ormond, Atlantic Beach (Mrs. Slosson); Sanford, Miami, Titusville, Lakeland, Jacksonville, Crescent City, LaBelle, Ft. Myers, (A. M. N. H.); St. John's Bluff, E. Florida (Walker); Gainesville (C. J. D.).

Acutalis inornata Ball. Biscayne Bay (Mrs. Slosson).

Acutalis tartarea Say. "Taken at all stations" (Van Duzee); Atlantic Beach, Jacksonville, Ormond (Mrs. Slosson); Sanford, Crescent City (A. M. N. H.); Gainesville (C. J. D., J. R. W.).

Acutalis tartarea var. *semicrema* Say. St. Augustine (Johnson); Gainesville (C. J. D.).

Micrutalis calva Say. "Generally distributed in the State" (Van Duzee); Newberry (A. M. N. H.; Biscayne Bay, Belleair, Lake Worth, Ormond (Mrs. Slosson); Gainesville (J. R. W.).

Telamona collina Walk. St. John's Bluff, E. Florida (Walker).

Telamona conica Walk. St. John's Bluff, E. Florida (Walker).

Telamona monticola Fab. Seven Oaks (Van Duzee).

Telamona praealta Fowl. Tampa (Van Duzee).

Telamona subfalcata Van D. Belleair (Mrs. Slosson); Gainesville (C. J. D.).

Archasia galeata (Fab.) Estero (Van Duzee); Jacksonville (Mrs. Slosson); St. Augustine (Johnson); Gainesville, April (J. R. W.).

Smilia camelus (Fab.) Jacksonville (Mrs. Slosson); Gainesville, April (J. R. W.).

Similia fasciata A. and S. Lake Worth, Jacksonville (Mrs. Slosson).

Cyrtolobus ovatus Van D. Sanford, Estero (Van Duzee); Marco, Apr. (A. M. N. H.).

Crytolobus arcuatus (Emm.) Ormond (Mrs. Slosson).

Crytolobus fenestratus (Fh.) Jacksonville (Mrs. Slosson); Gainesville (C. J. D.).

Crytolobus sculptus Fairm. Jacksonville (Mrs. Slosson).

Crytolobus nitidus Van D. Jacksonville (Mrs. Slosson).

Cytolobus tuberosus (Fairm.) Belleair (Mrs. Slosson).

Cyrtolobus tumidus (Walk.) St. John's Bluff, E. Florida (Walker).

Cyrtolobus vau (Say). Belleair, Jacksonville (Mrs. Slosson).

Cyrtolobus inermis (Emm). Jacksonville (Mrs. Slosson).

Antianthe expansa Germ. "Florida" (Van Duzee).

Ophiderma flavicephala Godg. "Florida" (Van Duzee); Gainesville (C. J. D.).

Ophiderma salamandra Fairm. Tampa, Sevenoaks (Van Duzee); Jacksonville (Mrs. Slosson).

Stictolobus 3-lineatus Funk. Gainesville (C. J. D.).

Idioderma virescens Van D. "Taken occasionally at all places where I worked" (Van Duzee); Estero (Van Duzee); Sanford, Clearwater (A. M. N. H.); Gainesville (C. J. D.); St. Petersburg (H. O.).

Idioderma varia Van D. Estero (Van Duzee).

Vanduzea triguttata (Burm.) St. Petersburg, Estero, Sevenoaks (Van Duzee); Jacksonville (Mrs. Slosson).

Entylia concisa Walk. Crescent City (Van Duzee).

Entylia sinuata (Fab.) Crescent City. Sanford, Ft. Myers (Van Duzee); St. Augustine (Johnson); Gainesville (J. R. W.).

Umbonia crassicornis (A. & S.) "Florida" (Amy. et Serv). No modern records.

Platycotis vittata Fab. "Florida" (Goding); St. Augustine (Johnson); LaBelle on water oak (H. O.). Occurs in two forms—spotted and striped.

Platycotis sagittata Germ. Crescent City. Sevenoaks (Van Duzee).

Enchenopa binotata Say. St. Augustine (Johnson).

Campylenchia latipes (Say). Gainesville (C. J. D.).

Tylopelta brevis Van D. Crescent City (Van Duzee).

Centruchoides perdita A. and S. Jacksonville (Mrs. Slosson).

CERCOPIDAE

Tomaspis bicincta (Say). Sanford, Ft. Myers (Van Duzee); Lake Worth, Biscayne Bay (Mrs. Slosson); Clearwater, Apr., Ft. Myers, Nov., Mch., Everglade, Apr. (A. M. N. H.); Gainesville (J. R. W.).

Aphrophora quadrinotata Say. "Florida" (Ball).

Aphrophora saratogensis (Fitch). Crescent City (Van Duzee); Jacksonville (Mrs. Slosson); Gainesville (C. J. D.).

Lepyronia angulifera Uhl. "Found in moderate numbers at all places where I collected in Florida" (Van Duzee); Biscayne Bay (Mrs. Slosson); Sanford, Clearwater, Crescent City, Ft. Myers, LaBelle, Tampa, Punta Gorda, Lakeland, Newberry (A. M. N. H.).

Lepyronia quadrangularis Say. "Florida" (Ball); Gainesville (C. J. D.).

Clastoptera obtusa (Say). This very common northern species has been taken at Gainesville. (C. J. D.)

Clastoptera proteus var. *saint-cyri* Prov. Crescent City (Van Duzee).

Clastoptera proteus var. *vittata* Ball. Sevenoaks (Van Duzee).

Clastoptera xanthocephala Germ. "Abundant everywhere in Florida" (Van Duzee); Biscayne Bay, Belleair (Mrs. Slosson); Clearwater, Sanford, Crescent City, Jacksonville (A. M. N. H.); Gainesville (C. J. D., J. R. W.); St. Petersburg and numerous other points (H. O.).

Clastoptera xanthocephala var. *glauca* Van D. Ormond, Biscayne Bay (Mrs. Slosson); St. Petersburg, Miami (A. M. N. H.); Gainesville (J. R. W.).

FAM. CICADELLIDAE

Sub. Fam. Bythoscopinae

Agallia novella (Say). Crescent City (Van Duzee); Gainesville (C. J. D., J. R. W.); Lake City (Col. Ag. Exp. Sta.).

Agallia constricta Van D. Crescent City. Sanford, (Van Duzee and A. M. N. H.); Ormond, Jacksonville, Atlantic Beach (Mrs. Slosson); Gainesville (C. J. D.); Lake City (Coll. Ag. Exp. Sta.); St. Petersburg (H. O.) abundant and of economic importance.

Agallia 4-punctata Prov. (H. L. Dozier).

Agallia deleta Van D. Crescent City, Sanford, Ft. Myers, (Van Duzee); Belleair (Mrs. Slosson).

Agallia sanguinolenta Prov. Crescent City, Sanford (Van Duzee); Lake Worth (Mrs. Slosson); Gainesville (C. J. D.); St. Petersburg (H. O.). Widely distributed and injurious.

Agallia immaculata Lath. Gainesville (C. J. D.)

Agallia lyrata Baker. Crescent City (Van Duzee).

Agallia variata Uhl. Lake Worth (Mrs. Slosson).

Agallia oculata Van D. Gainesville (C. J. D.).

Idiocerus nervatus Van D. Crescent City (Van Duzee).

Sub. Fam. Cicadellinae

Oncometopia lateralis (Fab.) Crescent City, Sanford, Tampa (Van Duzee); Sanford, Clearwater. Jacksonville (A. M. N. H.); St. Augustine (Johnson). Gainesville (C. J. D.); especially common on sunflowers (J. R. W.). St. Petersburg (H. O.).

Oncometopia undata (Fab.) "Found commonly throughout Florida" (Van Duzee); Jacksonville, Ormond (Mrs. Slosson); Clearwater, Sanford, Lakeland, Miami, Key Largo (A. M. N. H.); St. Augustine (Johnson); Lake Wales, Gainesville (J. R. W.).

Homalodisca triquetra (Fab.) Sanford, Sevenoaks (Van Duzee); Sanford, Clearwater (A. M. N. H.); Gainesville (J. R. W.).

Aulacizes guttata Uhl. Ft. Myers (Van Duzee); Biscayne Bay (Mrs. Slosson); Ft. Myers, Deep Lake, Apr. (A. M. N. H.).

Aulacizes irrorata (Fab.) Lake Worth, Biscayne Bay (Mrs. Slosson); Crescent City, Sanford, Apr. (A. M. N. H.). Gainesville (J. R. W.); Lake City (A. L. Quaintance).

Aulacizes pollinosa Fowl.

Cicadella occatoria (Say). Crescent City, Sanford (Van Duzee); Crescent City (A. M. N. H.); Atlantic Beach, Jacksonville (Mrs. Slosson); "Florida" (Ball); Gainesville (J. R. W., C. J. D.); St. Petersburg (H. O.).

Kolla bifida (Say). Gainesville (C. J. D., J. R. W.).

Kolla bifida fasciata (Walk.) "Common everywhere in Florida" (Van Duzee); Biscayne Bay. Jacksonville, Belleair (Mrs. Slosson); Crescent City, LaBelle, Ft. Myers, Lakeland (A. M. N. H.); "Florida" (Ball); St. Petersburg (H. O.).

Kolla geometrica (Sign.) "Common in Florida" (Van Duzee); Crescent City, Sanford (A. M. N. H.); Belleair (Mrs. Slosson), Gainesville, (H. L. D. C. J. D.); Bradentown (J. R. W.); St. Petersburg (H. O.).

Kolla hartii (Ball) Ft. Myers, Estero (Van Duzee); Ormond, Biscayne Bay, Lake Worth (Mrs. Slosson); Ft. Myers, LaBelle (A. M. N. H.). Destructive in grass; St. Petersburg (H. O.)

Kolla similis (Walk.) Biscayne Bay. (Mrs. Slosson; Miami (A. M. N. H.) Common in West Indies and Central America. Possibly a recent introduction.

Graphocephala coccinea (Forst.) Crescent City, Sanford, (Van Duzee and A. M. N. H.); Ft. Myers (Van Duzee); Jacksonville, Atlantic Beach (Mrs. Slosson); St. Augustine (Johnson); Gainesville (C. J. D.); St. Petersburg (H. O.) Abundant and affecting many kinds of plants.

Graphocephala versuta Say. "Taken everywhere in Florida" (Van Duzee); Biscayne Bay, Ormond, (Mrs. Slosson); Sanford, South Bay of L. Okeechobee (A. M. N. H.). Gainesville (C. J. D., J. R. W., H. L. D.). Lake Wales (J. R. W.); St. Petersburg (H. O.). Very common and certainly injurious.

Draeculacephala floridana Ball. Charlotte Harbor (Mrs. Slosson); Everglade (A. M. N. H.); St. Petersburg, Salt Marsh Meadow (H. O.)

Draeculacephala balli Van D. Gainesville (C. J. D.)

Draeculacephala acuta Walk. South Bay of L. Okeechobee (A. M. N. H.); St. John's Bluff, E. Florida (Walker).

Draeculocephala mollipes Say. Crescent City, Clearwater, (Van Duzee); Belleair, Ormond, Lake Worth, (Mrs. Slosson) South Bay of L. Okeechobee (A. M. N. H.). Very widely distributed and injurious.

Draeculacephala mollipes minor Walk. "Taken in damp places and near water in most localities where I collected in Florida" (Van Duzee); Ormond (Mrs. Slosson); Ft. Myers, Lakeland, Crescent City, Sanford (A. M. N. H.)

Draeculacephala inscripta Van D. Gainesville (C. J. D.)

Draeculacephala reticulata Sign. St. Petersburg, Estero (Van Duzee; Belleair, Biscayne Bay, Ormond, Jacksonville, (Mrs. Slosson); Everglade, Marco, LaBelle, Ft. Myers (A. M. N. H.); Lake City (H. A. G.); Moore Haven, Gainesville, (J. R. W.); St. Petersburg, Key West, Miami, and at almost every locality visited (H. O.) Very injurious to grasses and cereals.

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Draeculacephala 7-guttata Walk. "Generally distributed but not common in Florida" (Van Duzee); Jacksonville, Ormond, Biscayne Bay. Belleair, Lake Worth (Mrs. Slosson); Titusville, Punta Gorda, Sanford (A. M. N. H.) Gainesville (C. J. D.); St. Petersburg (H. O.).

Penthima americana Fitch. "Taken everywhere in Florida" (Van Duzee); Charlotte Harbor, Biscayne Bay, Jacksonville, (Mrs. Slosson); Clearwater, Sanford, Ft. Myers, Jacksonville (A. M. N. H.); St. Augustine (Johnson). Gainesville (C. J. D.); St. Petersburg (H. O.)

Gypona rugosa Spangb. Belleair (Mrs. Slosson); Lakeland, Jacksonville (A. M. N. H.)

Gyona 8-lineata (Say). "Common everywhere in Florida" (Van Duzee); Biscayne Bay, Jacksonville (Mrs. Slosson); Lakeland, Ft. Myers, Crescent City, Sanford, Jacksonville (A. M. N. H.). Gainesville, (C. J. D. H. L. D.)

Gypona albosignata Uhl. Jacksonville (Mrs. Slosson).

Gypona scarlatina var. *citrina* Spangb. Crescent City, Sanford, (Van Duzee); Atlanta Beach (Mrs. Slosson); Gainesville, Common. Canal Point (H. O.)

Gypona irrorella Spangb. Ft. Myers (Van Duzee); La Belle, Ft. Myers (A. M. N. H.)

Gypona striata Burm. "Florida" (Van Duzee); Ormond, Biscayne Bay, Jacksonville (Mrs. Slosson).

Gypona tenella Spangb. Sanford, Sevenoaks (Van Duzee); Lakeland May (A. M. N. H.); Biscayne Bay (Mrs. Slosson).

Gypona sanguinolenta Spangb. Sanford, Ft. Myers (Van Duzee); Jacksonville (Mrs. Slosson).

Gypona scarlatina Fitch. Miami (A. M. N. H.).
Gypona miliaris Stal. Gainesville (C. J. D.).
Gypona resima Fowl. Gainesville (C. J. D.).
Xerophloea viridis Fab. Biscayne Bay (Mrs. Slosson); St. Augustine (Johnson).

Sub. Fam. Jassinae

Xestocephalus pulicarius Van D. Crescent City, Ft. Myers (Van Duzee); Everglade (A. M. N. H.). Gainesville (C. J. D.); St. Petersburg (H. O.)
Xestocephalus tessellatus Van D. Jacksonville, Belleair, Biscayne Bay, Charlotte Harbor (Mrs. Slosson); LaBelle, Apr. (A. M. N. H.).
Dorycephalus vanduzei Osb. and Ball. Clearwater (Van Duzee); St. Petersburg, Ruskin (H. O.).
Dorydiella floridana Baker. "Florida" (Baker).
Hecalus apicalis Van D. Crescent City, St. Petersburg, Estero (Van Duzee); Punta Gorda (A. M. N. H.).
Neoslossonia putnami (Osb.) Sanford (Van Duzee); Jacksonville (Mrs. Slosson).
Spangbergiella mexicana Baker. Biscayne Bay (Mrs. Slosson); Gainesville (C. J. D.); St. Petersburg (H. O.)
Spangbergiella vulnerata Uhl. Crescent City, Sanford, St. Petersburg, Ft. Myers (Van Duzee); Belleair, Ormond (Mrs. Slosson); Lakeland Nov. (A. M. N. H.); Gainesville (C. J. D.); St. Petersburg (H. O.)
Parabolocratus flavidus Sign. "Taken at most of the places where I collected but not at all common" (Van Duzee); Punta Gorda. Nov. (A. M. N. H.); Gainesville (C. J. D.); St. Petersburg, common. (H. O.)
**Platymetopius elegans* Van D. (?) Tampa, on live oak (H. O.).
Platymetopius frontalis Van D. Jacksonville, Biscayne Bay (Mrs. Slosson); Ft. Myers, Apr. (A. M. N. H.). Gainesville (C. J. D. J. R. W.). St. Petersburg (H. O.)
Platymetopius parvus Lath. Gainesville (C. J. D.).
Platymetopius loricatus Van D. Sevenoaks, St. Petersburg, Ft. Myers (Van Duzee); Belleair (Mrs. Slosson).
Platymetopius magdalensis Prov. Gainesville (C. J. D.).
Platymetopius nasutus Van D. Belleair (Mrs. Slosson).
Platymetopius slossoni Van D. Jacksonville (Mrs. Slosson); Jacksonville, Newberry (A. M. N. H.). Gainesville (C. J. D., H. L. D., J. R. W.)

Platymetopius verecundus Van Duzee. Crescent City, Sanford, Sevenoaks, Clearwater, Estero (Van Duzee); Sanford (A. M. N. H.). Gainesville (C. J. D.).

Scaphoideus scalaris Van D. Jacksonville, Nov. (A. M. N. H.).

Scaphoideus unicolor Osb. Sanford (Van Duzee) Gainesville (C. J. D.).

Scaphoideus consors Uhl. Crescent City (Van Duzee).

Scaphoideus fasciatus Osb. Gainesville (C. J. D.).

Scaphoideus cruciatus Osb. Marco, Everglade, Apr. (A. M. N. H.); Clearwater, Ft. Myers (Van Duzee); Biscayne Bay (Mrs. Slosson). Gainesville (C. J. D.).

Scaphoideus obtusus Osb. Crescent City, Sanford, Sevenoaks, Ft. Myers (Van Duzee).

Scaphoideus albonotatus Van D. Estero (Van Duzee).

Scaphoideus auronitens Prov. Biscayne Bay. (Mrs. Slosson); Crescent City, Apr. (A. M. N. H.).

Scaphoideus immistus Say. Crescent City, Apr. (A. M. N. H.).

Scaphoideus jucundus Uhl. Estero (Van Duzee).

Scaphoideus neglectus Osb. Crescent City, St. Petersburg (Van Duzee); Biscayne Bay (Mrs. Slosson). Gainesville, (C. J. D.).

Scaphoideus opalinus Osb. Sevenoaks (Van Duzee).

Deltocephalus slossoni Ball. Biscayne Bay (Mrs. Slosson).

Deltocephalus inflatus Osb. and Ball. Crescent City, Estero, Sevenoaks (Van Duzee).

Deltocephalus visendus Crumb. Gainesville.

Deltocephalus reflexus Osb. and Ball. Belleair (Mrs. Slosson).

Deltocephalus fraternus Ball. Jacksonville (Mrs. Slosson); Lakeland, Newberry, Clearwater, Jacksonville (A. M. N. H.). Gainesville, (C. J. D.). St. Petersburg, Ruskin and many other places on grass in "flatwoods". (H. O.)

Deltocephalus misellus Ball. Jacksonville, Nov. (A. M. N. H.).

Deltocephalus weedi Van D. Crescent City, Clearwater, Sevenoaks, Estero (Van Duzee); Biscayne Bay (Mrs. Slosson); Jacksonville, Nov. (A. M. N. H.). Gainesville (J. R. W.)

Deltocephalus micarius Ball. Sevenoaks, Sanford (Van Duzee).

Deltocephalus obtectus Osb. and Ball. "Taken occasionally at nearly all places where I worked in Florida" (Van Duzee); Belleair, Biscayne Bay (Mrs. Slosson); Newberry, Jacksonville, Lakeland, Nov. (A. M. N. H.). Gainesville (C. J. D.). Lake City (H. A. G.) Common on Bermuda grass and doubtless destructive.

Deltocephalus compactus Osb. and Ball. Gainesville (C. J. D.).

Deltocephalus flavicosta Stal. Biscayne Bay, Atlantic Beach (Mrs. Slosson); Lakeland, LaBelle, Titusville, Key Largo, Everglade, Sanford (A. M. N. H.). Gainesville (C. J. D. J. R. W.). St. Petersburg, Largo, etc. (H. O.)

**Deltocephalus marinus* Osb. and Metcalf. Long Key, Pinellas Co. (H. O.).

Deltocephalus littoralis Ball. St. Petersburg (Van Duzee); Everglade, Apr. (A. M. N. H.). At shoreline on grasses subject to submergence at high tide as observed in N. C.

Deltocephalus caperatus Ball. Sevenoaks (Van Duzee).

Deltocephalus balli Van D. Lake Worth (Mrs. Slosson). St. Petersburg (H. O.)

Deltocephalus mendosus Ball. Estero (Van Duzee); Lake City (Gossard).

**Deltocephalus satur* Ball. St. Petersburg (H. O.).

Deltocephalus sonorus Ball. Estero, St. Petersburg (Van Duzee); Ormond, Belleair, Biscayne Bay (Mrs. Slosson); St. Petersburg (H. O.).

Lonatura bicolor Van D. St. Petersburg, Largo, Ruskin. Fairly common at some points in "flatwoods" on grasses (H. O.)

Euscelis bicolor (Van D.) Crescent City, Tampa, St. Petersburg (Van Duzee). Gainesville (C. J. D. J. R. W.). Lake City (A. L. Quaintance). Bradentown J. R. W.

Euscelis exitiosus (Uhl.) "Common everywhere in Florida" (Van Duzee): Biscayne Bay, Belleair, Ormond, Lake Worth, Jacksonville (Mrs. Slosson); Punta Gorda, Marco (A. M. N. H.). Gainesville (C. J. D. J. R. W.). Lake City (H. A. G.). Moore Haven (J. R. W.)

Euscelis obtutus (Van D.) Crescent City (Van Duzee); St. Petersburg (H. O.)

Eutettix bartschi Van D. Sevenoaks, Estero (Van Duzee); Ormond, Biscayne Bay, Atlantic Beach (Mrs. Slosson); St. Petersburg, Miami (A. M. N. H.).

Eutettix lurida Van D. Titusville, Nov. (A. M. N. H.); St. Augustine (Johnson).

Eutettix marmoratus Van D. "Florida" (Ball).

Eutettix slossoni Van D. Sanford, St. Petersburg, Sevenoaks, Ft. Myers (Van Duzee); Biscayne Bay (Mrs. Slosson); Clearwater (A. M. N. H.). Gainesville (C. J. D.)

Eutettix nitens Van D. Sevenoaks, Estero (Van Duzee).

Eutettix picta Van D. "Florida" (Ball). Gainesville (C. J. D.).

Eutettix seminuda (Say). Gainesville (C. J. D., J. R. W.); Lake City (Gossard).

Eutettix cincta Osb. and Ball. Gainesville (C. J. D.).

Eutettix tristis Ball. "Florida" (Ball).

**Phlepsius distinctus* Lathrop. St. Petersburg (H. O.).

Phlepsius attractus Ball. Jacksonville (Mrs. Slosson).

Phlepsius cinereus Van D. Biscayne Bay (Mrs. Slosson).

Phlepsius collitus Ball. Jacksonville (Mrs. Slosson).

Phlepsius costomaculatus Van D. Belleair, Biscayne Bay (Mrs. Slosson); Crescent City, Sanford, Sevenoaks, St. Petersburg, Ft. Myers (Van Duzee); LaBelle (A. M. N. H.). Gainesville (J. R. W.). Clearwater (Gossard).

Phlepsius decorus Osb. and Ball. Tampa (Van Duzee).

Phlepsius excultus Uhl. Crescent City, Sanford, Sevenoaks, Ft. Myers (Van Duzee); Jacksonville, Biscayne Bay (Mrs. Slosson); Crescent City, Sanford, Marco (A. M. N. H.); St. Augustine (Johnson). Gainesville (J. R. W.). Clearwater (Gossard).

Phlepsius floridanus Ball. Biscayne Bay (Mrs. Slosson).

Phlepsius fulvidorsum Fitch. "Florida" (Van Duzee).

Phlepsius fuscipennis Van D. "Common everywhere in suitable locations" (Van Duzee); Lake Worth, Belleair, Biscayne Bay. Jacksonville (Mrs. Slosson); Newberry, Punta Gorda, Nov. (A. M. N. H.). Bradentown (J. R. W.)

Phlepsius irroratus Say. Jacksonville (Mrs. Slosson).

Phlepsius lippulus Ball. Biscayne Bay (Mrs. Slosson).

Phlepsius mimus Baker. Crescent City (Van Duzee).

Phlepsius nebulosus Van D. "Florida" (Van Duzee).

Phlepsius nudus Ball. Sevenoaks, Ft. Myers (Van Duzee).

Phlepsius punctiscriptus Van D. Belleair, Charlotte Harbor (Mrs. Slosson).

Phlepsius slossoni Ball. Biscayne Bay (Mrs. Slosson).

Phlepsius truncatus Van D. Crescent City, Sevenoaks (Van Duzee).

Acinopterus acuminatus Van D. Tampa, Sanford (Van Duzee); Biscayne Bay (Mrs. Slosson); Jacksonville, Newberry, Miami, Nov. (A. M. N. H.). Gainesville (C. J. D.); St. Petersburg (H. O.).

**Thamnotettix aureovittatus* Sand. & DeL. Described from Big Bayou and St. Petersburg.

Thamnotettix comata Ball. Crescent City, Sanford, Sevenoaks, St. Petersburg (Van Duzee); Belleair (Mrs. Slosson); LaBelle, Nov. (A. M. N. H.).

Thamnotettix orbonata Ball. Biscayne Bay (Mrs. Slosson).

Thamnotettix nigrifrons (Forbes). Crescent City, Sanford, St. Petersburg (Van Duzee); Jacksonville, Ormond, Belleair, Atlantic Beach (Mrs. Slosson); Crescent City, LaBelle, Titusville (A. M. N. H.). Abundant—destructive to grasses and cereal crops.

Thamnotettix colonus (Uhl.) Gainesville, St. Petersburg (H. O.) An abundant species in grass lands.

Thamnotettix subcuprea (Prov.) Sanford, Sevenoaks, Ft. Myers (Van Duzee); Jacksonville (Mrs. Slosson).

Thamnotettix brittoni Osb. Gainesville (C. J. D.).

Chlorotettix galbanata Van D. Ft. Myers (Van Duzee).

Chlorotettix minima Baker. Estero (Van Duzee).

Chlorotettix necopina Van D. Crescent City, Sanford, Sevenoaks, Clearwater (Van Duzee); Biscayne Bay, Ormond (Mrs. Slosson); LaBelle, Titusville, Jacksonville, Sanford (A. M. N. H.). Gainesville (C. J. D.); St. Petersburg (H. O.) Common in coarse grasses.

Chlorotettix rugicollis Ball. "Taken at most places where I worked" (Van Duzee); Jacksonville (Mrs. Slosson); Jacksonville, Lakeland, Newberry, Ft. Myers (A. M. N. H.). Gainesville (C. J. D.); St. Petersburg, Ruskin, Delray. Common. (H. O.)

Chlorotettix spatulata Osb. and B. Jacksonville (Mrs. Slosson).

Chlorotettix tergatus (Fitch). "Florida" (Van Duzee).

Chlorotettix tunicata Ball. Sanford, Clearwater, Estero, St. Petersburg (Van Duzee); Belleair, Biscayne Bay (Mrs. Slosson); Marco, Sanford, Miami (A. M. N. H.).

Chlorotettix viridius Van D. "Taken at all places where I worked," St. Petersburg, Sevenoaks (Van Duzee); Belleair (Mrs. Slosson); Sanford, Clearwater (A. M. N. H.). An abundant species in grass lands.

Jassus olitorius Say. "Common everywhere in Florida" (Van Duzee); Ormond, Belleair, Charlotte Harbor (Mrs. Slosson); Sanford, Estero, Clearwater, Crescent City, LaBelle, Marco, Lakeland, Titusville, Jacksonville (A. M. N. H.); St. Augustine (Johnson). Gainesville (C. J. D.). Common in woodland. Lake City (Exp. Sta. Coll.)

Jassus melanotus Spang. Gainesville (J. R. W.).
Jassus borealis Spang. Bradentown (J. R. W.).
Neocoelidia tumidifrons Gill. and Bak. Jacksonville (Mrs. Slosson); St. Petersburg (H. O.)
Paracoelidea tuberculata Baker. Sevenoaks (Van Duzee); Jacksonville (A. M. N. H.). Common on pines.
Tinobregmus vittatus Van D. Biscayne Bay. (Mrs. Slosson).
Cicadula 6-notata Fall. Sanford, Ft. Myers (Van Duzee). Gainesville.
Balclutha impicta Van D. Crescent City (Van Duzee). var. *medius* Bak.
Eugnathodus abdominalis Van D. Sanford, Clearwater, Ft. Myers (Van Duzee); Biscayne Bay, Ormond (Mrs. Slosson). Abundant in grasses.
Protolebra braziliensis Bak. Belleair, Biscayne Bay (Mrs. Slosson).
Empoasca flavescens Fab. Crescent City, Estero (Van Duzee).
Empoasca mali LeB. Crescent City, Sanford, Ft. Myers, Estero (Van Duzee); Jacksonville (Mrs. Slosson).
Empoasca viridiscens Walsh. (Van Duzee Cat.)
Empoasca unicolor Gill. Ormond (Mrs. Slosson).
**Empoasca minuenda* Ball. On avocado W. Palm Beach (G. F. Moznette).
Typhlocyba flavoscuta Gill. Sanford, Sevenoaks (Van Duzee).
Typhlocyba rubricata Van D. Crescent City (Van Duzee).
Erythroneura comes Say. Crescent City, Sevenoaks, Estero (Van Duzee); Jacksonville (A. M. N. H.).

FULGORIDAE

Cyrpoptus belfragei Stal. Tampa (Van Duzee); St. Augustine, Nov. (Engelhardt. and Johnson). Enterprise?
Cyrpoptus reineckii Van Duzee. Widely distributed in the state. Estero (Mrs. Slosson); Jacksonville (Sleight); Sanford, Clearwater, St. Petersburg, Apr., Jacksonville, May (A. M. N. H.). Gainesville (C. J. D. J. R. W.)
Dictyophara lingula Van D. Estero (Van Duzee); Punta Gorda, Lakeland, Nov. (Davis); Ormond (Mrs. Slosson); Punta Gorda, Nov. (A. M. N. H.) Gainesville (C. J. D. J. R. W.)
Dictyophara microrhina Walk. Jacksonville, Lakeland (Davis); Ft. Myers, Lakeland, Nov. (A. M. N. H.); St. Augustine (Johnson). Gainesville (J. R. W.)
Scolops spurcus Uhl. Gainesville (C. J. D.).
Scolops angustatus Uhl. St. Augustine (Johnson).

Scolops desiccatus Uhl. Crescent City, Sanford (Van Duzee).
Scolops sulcipes Say. "Florida" (Uhler). Gainesville (J. R. W.); Common over large part of Eastern United States.
Phylloscelis atra Germ. St. Petersburg, Sevenoaks, Ft. Myers and Estero (Van Duzee); Ft. Myers, Jacksonville, Miami, Nov. (A. M. N. H.). Gainesville. Widely distributed.
Phylloscelis atra var. *albovenosa* Mel.
Phylloscelis pallescens Germ. Estero (Van Duzee).
Tangia sponsa Uhl. "Southern Florida" (Uhler).
Monopsis tabida Spin. "Florida" (Van Duzee).
Catonia picta Van D. Estero (Van Duzee); Gainesville (C. J. D.).
Catonia bicinctura, Punta Gorda, Newberry (Van Duzee). Gainesville (C. J. D.).
Ellidiptera floridae Walk. Newberry (Davis).
Ellidiptera pallida Say. "Florida" (Say).
Bothriocera tinealis Burm. Charlotte Harbor, Biscayne Bay (Mrs. Slosson). Gainesville (J. R. W. C. J. D.)
Bothriocera signorite?
Bothriocera undata Fab. "Was taken everywhere I collected in Florida" (Van Duzee); Lake Worth, Biscayne Bay, Ormond (Mrs. Slosson).
Oliarus quinquelineatus Say. Jacksonville (Mrs. Slosson). Common over Eastern United States.
Oliarus placitus Van D. Ft. Myers, May (Van Duzee); Gainesville (C. J. D. J. R. W.).
Oliarus vicarius Walk. Estero, Ft. Myers, St. Petersburg, Clearwater, Sevenoaks. (Van Duzee); Jacksonville, Ormond, Charlotte Harbor (Mrs. Slosson); Marco, Apr. (A. M. N. H.); St. Augustine (Johnson). Gainesville (C. J. D.).
Oliarus complectus Ball. St. Petersburg, Sevenoaks, Estero (Van Duzee); Key Largo, Nov. (A. M. N. H.). abundant and widely distributed.
Oliarus slossoni Van D. Belleair, Biscayne Bay (Mrs. Slosson).
Oliarus difficilis Van D. Belleair (Mrs. Slosson).
Monorhachis sordulentus Uhl. Lake Worth (Mrs. Slosson); Gainesville.
Cixius dorsivittatus Van D. Crescent City (Van Duzee); Biscayne Bay (Mrs. Slosson); Everglade, Apr. (A. M. N. H.).
Oecleus borealis Van D. "Abundant at all places, especially towards the southern end of the state" (Van Duzee); Jacksonville, Ormond, Atlantic Beach (Mrs. Slosson) Clearwater, Apr., Sanford, May (A. M. N. H.). Gainesville (C. J. D.).

Myndus delicatus Van D. "Florida" (Van Duzee).

Myndus slossoni Ball. Crescent City (Van Duzee); Biscayne Bay, Charlotte Harbor (Mrs. Slosson); Crescent City, Sanford, Apr. (A. M. N. H.). Gainesville (J. R. W.). St. Petersburg (H. O.)

Myndus enotatus Van D. Crescent City, Apr. (Van Duzee, Mrs. Slosson and A. M. N. H.); Ormond, Charlotte Harbor, Biscayne Bay (Mrs. Slosson); Sanford, Apr. (A. M. N. H.); St. Petersburg (H. O.)

Myndus lunatus Van D. Sanford, Sevenoaks, Ft. Myers, Estero, (Van Duzee).

Myndus pusillus Van D. Crescent City, Sevenoaks (Van Duzee); Ormond, Atlantic Beach, Charlotte Harbor (Mrs. Slosson).

Pelitropis rotulata Van Duz. Ft. Myers, Estero (Van Duzee); Lake Worth, Biscayne Bay (Mrs. Slosson). Gainesville (C. J. D.)

Fitchiella robertsoni (Fitch). Estero (Van Duzee); St. Petersburg (H. O.)

Bruchomorpha pallidipes Stal. Crescent City, Estero (Van Duzee).

Bruchomorpha suturalis Melich. "Common throughout Florida" (Van Duzee); Ft. Myers, Lakeland, Newberry, Nov. (A. M. N. H.).

Bruchomorpha tristis Stal. Crescent City, Estero, Sevenoaks (Van Duzee).

Bruchomorpha jocosa Stal. Crescent City, Sanford, Sevenoaks, St. Petersburg, Tampa, Ft. Myers (Van Duzee); Lakeland, Nov. (A. M. N. H.).

Aphelonema decorata Van D. Crescent City, St. Petersburg (Van Duzee); Charlotte Harbor (Mrs. Slosson).

Hysteropterum punctiferum Walk. Widely distributed and very abundant. Jacksonville (Mrs. Slosson); Clearwater, Sanford, Tampa (A. M. N. H.). Gainesville (C. J. D. J. R. W.). Plentiful.

Thionia simplex Germ. Sevenoaks (Van Duzee); Gainesville (C. J. D. J. R. W.).

Thionia bullata Say. Jacksonville (Mrs. Slosson); Gainesville (C. J. D. J. R. W.).

Acanalonia bivittata (Say). Estero (Van Duzee); Gainesville (C. J. D.).

Acanalonia latifrons (Walk.) Tampa, Ft. Myers, Estero (Van Duzee); St. Augustine (Johnson); Biscayne Bay (Mrs. Slosson); Lakeland (A. M. N. H.). Gainesville (C. J. D. J. R. W.).

Acanalonia pumila (Van D.) Estero Island (Van Duzee); Biscayne Bay (Mrs. Slosson). Cedar Keys, Gainesville (J. R. W.)

Acanalonia conica (Say). Gainesville (C. J. D.).

Acanalonia servillei Spin. "Florida" (Uhler); Gainesville (C. J. D.).

Ormenis proxima (Walk.) "East Florida" (Walker).

Ormenis pruinosa (Say). Sevenoaks, Estero (Van Duzee); Clearwater, Apr. (A. M. N. H.); St. Augustine (Johnson). Gainesville (J. R. W.)

Ormenis rufifascia (Walk.) Ft. Myers, Estero, Clearwater (Van Duzee); LaGrange, Sept. (Sleight); Sanford, Apr. (A. M. N. H.).

Ormenis septentrionalis (Spin.) St. Augustine (Johnson); Gainesville.

Cyarda melichari Van D. "Common everywhere in Florida" (Van Duzee); Sanford, Crescent City, St. Petersburg, Everglade, Tampa, Jacksonville, Newberry, Lakeland, Punta Gorda, Ft. Myers (A. M. N. H.). Gainesville (C. J. D. and J. R. W.). Blandon, New Smyrna, Bradentown (J. R. W.).

Flatoides punctatus (Walk.) "Taken occasionally at all places where I collected in Florida" (Van Duzee); Biscayne Bay, Jacksonville (Mrs. Slosson); Marco, Ft. Myers, Clearwater, Lakeland, Punta Gorda (A. M. N. H.). Gainesville (C. J. D.).

Amalopota fitchii Van D. Gainesville (C. J. D.). Heretofore known as a northern species and recorded only as far south as North Carolina.

Otiocerus abbotti Kirby. Jacksonville (A. M. N. H.). Gainesville (C. J. D.)

Otiocerus degeeri Kirby. Sevenoaks (Van Duzee); Jacksonville (A. M. N. H. and Davis); "Florida" (Uhler). Gainesville (C. J. D.).

Cenchrea fulva Van D. Estero (Van Duzee); Gainesville (J. R. W.). Also from Cuba.

Lamenia obscura Ball. Crescent City, Haw Creek (Van Duzee and A. M. N. H.). Gainesville (C. J. D.).

Copicerus irroratus Schwartz. Biscayne Bay (Mrs. Slosson). Gainesville (C. J. D.).

Stenocranus dorsalis Fitch. Crescent City, Sanford (Van Duzee); Biscayne Bay (Mrs. Slosson); Crescent City (A. M. N. H.).

Stenocranus dorsalis Fitch. var. *lautus* Van Duzee.

Stenocranus palaetus Van D. Crescent City (Van Duzee and A. M. N. H.); Everglade, Apr. (A. M. N. H.).

Stenocranus saccharivorus Westw. Tampa (Van Duzee).

Kelisia parvula Ball. "Florida" (Van Duzee).

Megamelanus elongatus Ball. Crescent City, St. Petersburg, Estero Island (Van Duzee); Belleair, Biscayne Bay, Ormond (Mrs. Slosson).

?Megamelanus spartini Osb. St. Petersburg (Van Duzee); Belleair (Mrs. Slosson).

Prokelesia marginata Van D. Estero (Van Duzee); Ormond (Mrs. Slosson).

Megamelus seminigra Stal. "Florida" (Van Duzee).

Macrotomella carinata Van D. Crescent City, Ft. Myers (Van Duzee).

Pissonotus marginatus Van D. Sevenoaks (Van Duzee).

Pissonotus basalis Van D. Ft. Myers, Estero (Van Duzee).

Pissonotus ater Van D. Crescent City, Tampa, Sevenoaks, Ft. Myers (Van Duzee); Titusville, Nov. (A. M. N. H.).

Pissonotus pallipes Van D. "Florida" (Van Duzee).

Pissonotus brunneus Van D. Crescent City (Van Duzee).

Pissonotus delicatus Van D. Sevenoaks, Crescent City, Estero (Van Duzee).

Peregrinus maidis Ashm. Estero (Van Duzee).

Phyllodinus nitens Van D. St. Petersburg, Estero (Van Duzee).

Bostaera nasuta Ball. Tampa, Sevenoaks (Van Duzee); St. Petersburg (H. O.)

Stobaera affinis Van D. Crescent City, Ft. Myers (Van Duzee); Biscayne Bay (Mrs. Slosson).

Stobaera pallida Osb. Ft. Myers, Estero (Van Duzee); Newberry (A. M. N. H.); Nassau (Crawford); Key West (H. O.)

Stobaera quadripustulata Van D. Estero (Van Duzee).

Stobaera concinna Stal. Biscayne Bay, Belleair (Mrs. Slosson); Gainesville (C. J. D.)

Liburniella ornata Stal. Crescent City (Van Duzee).

Liburnia slossoni Ball. Crescent City, Estero (Van Duzee); Biscayne Bay, Belleair, Lake Worth, Ormond (Mrs. Slosson).

Liburnia weedi Van D. Sanford, Crescent City (Van Duzee); Punta Gorda (A. M. N. H.)

Liburnia humilis Van D. Sanford, St. Petersburg (Van Duzee).
Liburnia laminalis Van D. Crescent City (Van Duzee); Belleair (Mrs. Slosson).
Liburnia culta Van D. Biscayne Bay (Mrs. Slosson).
Liburnia puella Van D. Crescent City, Sevenoaks (Van Duzee); Biscayne Bay, Belleair (Mrs. Slosson).
Liburnia basivitta Van D. Crescent City (Van Duzee); Jacksonville (Mrs. Slosson).
Liburnia osborni Van D. Estero (Van Duzee); Lakeland (Bradley).
Liburnia detecta Van D. Crescent City, St. Petersburg (Van Duzee); Ormond, Biscayne Bay, Lake Worth (Mrs. Slosson); Titusville (A. M. N. H.).
Liburnia tuckeri Van D. St. Petersburg (Van Duzee).
Liburnia foveata Van D. Lake Worth (Mrs. Slosson).
Liburnia albolinosa Fowler. Sevenoaks, Estero (Van Duzee); Titusville, LaBelle (A. M. N. H.).
Liburnia teapae Fowl. Biscayne Bay (Mrs. Slosson).
Liburnia seminigra Stal. Crescent City, Estero (Van Duzee); Miami (A. M. N. H.); Belleair, Ormond, (Mrs. Slosson).
Liburnia andromeda Van D. Sevenoaks, Tampa (Van Duzee); Lakeland (A. M. N. H.); Biscayne Bay, Belleair (Mrs. Slosson).

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